

REMARKS

In response to the Office Action, Paper No./Mail Date 20080218, dated March 5, 2008, and the Advisory Action, Paper No./Mail Date 20080714, dated July 24, 2008, Applicants have carefully studied the references cited by the Examiner and the Examiner's comments relative thereto. In the Advisory Action, the Examiner indicated that the amendments to the application would not be entered because "they raise new issues that would require further consideration and/or search." However, the Examiner did indicate whether certain amendments to the Specification and Claims overcome the rejections or objections. Accordingly, the amendments filed by the Applicants in the Amendment After Final filed on May 5, 2008 are repeated herein, where applicable, clarified based on the Examiner's comments in the Advisory Action.

Claims 1, 2, 9, 10, 15-17, and 22 have been amended.

Claim 8 has been cancelled.

Claims 1-7 and 9-22 remain in the application.

No new matter has been added.

Reconsideration of the application, as amended, is respectfully requested.

Specification Objection

In the March 5, 2008 Office Action, the Examiner objected to the amendment of page 6, lines 8-17 of the specification under 35 U.S.C. § 132(a) "because it introduces new matter into the disclosure." The Applicants proposed an amendment to page 6, lines 8-17 of the specification in their Amendment After Final. In the Advisory Action, the Examiner indicated: "Regarding the objection to the specification: Applicant's amendments appear to overcome the objection" (see Advisory Action, Pg. 2, Paragraph 1(a)). Therefore, the Applicants are repeating the amendment to page 6, lines 8-17 of the specification based upon the Examiner's comments in the Advisory Action.

Accordingly, the Applicants respectfully request that the amendment be entered, and the Examiner's objection to the Specification be withdrawn.

35 U.S.C. § 112

The Examiner rejected Claim 10 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

A proposed amendment to Claim 10 to provide proper antecedent basis for each limitation set forth therein and to point out and distinctly claim the subject matter which the Applicants regarded as the invention was filed with the Amendment After Final. The proposed amendment to Claim 10 was not entered. With respect to the non-entered Amendment of Claim 10 in the Applicants Amendment After Final, in the Advisory Action, the Examiner indicated: “Regarding Claim 10 rejected under 35 U.S.C. § 112, first paragraph: Applicant’s claim amendment may overcome the rejection; however it appears to cause a new rejection under 35 U.S.C. § 112, second paragraph. Further search and consideration is required.” (see Advisory Action, Pg. 2, Paragraph 2(a)).

However, in the present Amendment, Applicants have elected not to amend Claim 10. Therefore, turning to the Examiner’s rejection of Claim 10 from the March 5, 2008 Office Action, the Examiner stated that Claim 10 fails to comply with the written description requirement of 35 U.S.C. § 112, first paragraph. The Examiner asserts, “The specification does not appear to describe radiation absorption spectra of primary heating sources”.

The Applicants respectfully disagree with the Examiner’s assertion. It is clear from paragraph [0025] of the Specification, that radiation absorption spectra is described. Paragraph [0025] states that the equation of paragraph [0022] is used to “determine the total energy emitted for an entire range of wavelengths” (the “spectra”). The “spectra” of values derived from the equation are then multiplied by the emissivity of the lamps (the “primary heating source”) to obtain a radiation output (the “radiation”) that “is used as the energy incident upon the preform... for absorption calculations” (the “absorption”). It would be clear to one of ordinary skill in the art upon a mere reading of paragraph [0025] that the paragraph [0025] describes a method of determining the spectra of radiation absorbed by the preform based on the primary heating source. Therefore, because the Applicants have provided a “written description of the invention... in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains... to make and use the same”, Applicant’s respectfully request that the Examiner withdrawal the rejection of Claim 10 under 35 U.S.C. §112, first paragraph.

The Examiner rejected Claim 11 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner stated, “the claim does not appear to be described in the specification.”

Claim 11 recites:

The method according to claim 10 wherein said radiation spectra transmitted through a respective block of said preform is provided as an input for determining said absorption radiation incident to a next adjacent block.

Paragraph [0026] discloses, in part:

The inputted preform geometry is discretized (or digitized) into a plurality of small rectangular blocks having a respective volume (shown in FIG. 4). An amount of energy absorbed into each discretized block is calculated and utilized for a temperature calculation. Also, radiation transmitted through a respective discretized block is used in calculating the energy incident and absorbed in a next adjacent discretized block. The radiation absorbed by each respective discretized block is incident to the direct exposure or viewing angle of each lamp as each respective discretized block travels through the oven (FIG. 5).

Paragraph [0026] discloses all of the limitations of Claim 11. In the Advisory Action, the Examiner stated that “Applicant’s claim amendment tentatively appears to overcome the rejection; however, further search and consideration are required” (see Advisory Action, Pg. 2, Para. 3(a)). Accordingly, withdrawal of the rejection under 35 U.S.C. §112, first paragraph is respectfully requested.

35 U.S.C. § 103(a)

The Examiner rejected Claims 1 and 17 as being obvious over Hayden M. Reeve, et al., “Experimental and Numerical Investigation of Polymer Preform Heating”, April 2001, Journal of Materials Processing & Manufacturing Science in view of Travis L. Turner, et al., “Numerical and Experimental Analyses of the Radiant Heat Flux Produced by Quartz Heating Systems”, March 1994, NASA Technical Paper under 35 U.S.C. § 103(a).

The Examiner also rejected Claims 2-7, 12-16, and 18-22 as being obvious over Reeve as modified by Turner and further in view of J.P. McEvoy, et al. “Simulation of the Stretch Blow Molding Process of PET Bottles”, 1998, Advances in Polymer Technology.

Applicants respectfully assert that the Examiner has failed to establish a *prima facie* case of obviousness in regards to independent Claims 1, 15-17, and 22 because one skilled in the art would not be motivated or have any suggestion to combine the references.

More importantly, even if the references are combined, the combination of references does not produce each and every limitation of independent Claims 1, 15-17, and 22, as amended. Independent Claims 1, 15-17, and 22, as amended, recite a method for virtual prototyping of plastic containers or preforms comprising a step of solving energy equations based upon the “radiation absorption spectra of a material of said preform, wherein said step

of determining said radiation absorption spectra includes determining a view factor, said view factor characterized as said radiation absorption spectra of said primary heating sources incident on said preform at a respective oven location.” Applicants have amended Claims 1, 15-17, and 22 to include limitations from Claim 10. The Examiner rejected Claim 10 under 35 U.S.C. § 112, first paragraph, but not under either Section 102 or 103. None of the Office Actions have resulted in a rejection of Claim 10 for substantive reasons with support of a reference disclosing the limitations of Claim 10. As discussed above, the Applicants believe they have successfully traversed the Examiner’s rejection of Claim 10 under 35 U.S.C. § 112, first paragraph. Therefore, the incorporation of the limitations of Claim 10 into independent Claims 1, 15-17, and 22 results in claims allowable over the cited references.

Furthermore, a thorough examination of Reeve, Turner, and McEvoy shows that they are completely devoid of any disclosure regarding determining a view factor of the preform or container being heated characterized as the radiation absorption spectra of primary heating sources at a particular oven location. Therefore as discussed above, there is no motivation to combine the references, and even if the references are combined, the combination does not produce the limitation of determining a view factor. As a result, this combination of references cannot properly serve as a basis for rejection of independent Claims 1, 15-17, and 22 under 35 U.S.C. § 103(a), and Claims 1, 15-17, and 22 are allowable. Because Claims 1, 15-17, and 22 are allowable, Claims 2-7 and 9-14, which depend directly or indirectly from Claim 1, and Claims 18-21, which depend directly or indirectly from Claim 17, are also allowable.

The Examiner rejected Claims 8 and 9 as being obvious over Reeve as modifier by Turner as applied to Claims 1 and 17, further in view of Robert Siegel and John R. Howell, “Thermal Radiation Heat Transfer”, 2002, Taylor & Francis, pages 35-63, 155-192, 207, 248, 267-286, 295-325, 335-357, 371-406, 419-429 under 35 U.S.C. § 103(a).

Claims 8 and 9 depend, directly or indirectly, from Claim 1. For the reasons stated above, the combination of Reeve and Turner do not disclose each and every limitation of Claim 1, namely, disclosure regarding determining a view factor of the preform or container being heated characterized as the radiation absorption spectra of primary heating sources at a particular oven location. The Examiner relied on the Siegel reference for an alleged teaching of determining an absorption spectra and the alleged teaching of discretizing the preform into a plurality of blocks of a respective volume, wherein the absorption spectra is determined for each of the blocks. A thorough examination of Siegel shows that it is completely devoid of

any disclosure regarding determining a view factor of the preform or container being heated characterized as the radiation absorption spectra of primary heating sources at a particular oven location. Accordingly, the Siegel reference does not cure the defects of Reeve and Turner, and the combination of Reeve, Turner, and Siegel and cannot properly serve as a basis for rejection of Claims 8 and 9 under 35 U.S.C. § 103(a).

For the foregoing reasons, withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

The other references cited by the Examiner, but not applied, have been studied and are not considered to be any more pertinent than the references relied upon by the Examiner.

It is submitted that the claims distinctly define the Applicants' invention and distinguish the same from the prior art. Reconsideration of the application, as amended, is respectfully requested. A formal Notice of Allowance is solicited.

While the Applicants' attorney has made a sincere effort to properly define Applicants' invention and to distinguish the same from the prior art, should the Examiner deem that other language would be more appropriate, it is requested that a telephone interview be had with the Applicants' attorney in a sincere effort to expedite the prosecution of the application.